



DERBY PUBLIC SCHOOLS

35 Fifth Street
Derby, Connecticut 06418

(203) 736-5027 • fax (203) 736-5031 • www.derbyps.org

DERBY PUBLIC SCHOOLS

Kitchen Hood and Makeup Air Unit (MAU) installation

Request for Proposal

The City of Derby Board Of Education (BOE) is accepting proposals for the installation of a Kitchen hood with Fire system and MAU.

The Project Director is: **David Nardone, Facilities Managers**. All requests for information must be coordinated with the project director 203-736-5027
Dnardone@derbyps.org.

Sealed proposals in duplicate for Kitchen hood with Fire system and MAU, in accordance with specifications to be distributed at www.derbyps.org/bids must be received in duplicate by the City of Derby BOE 35 Fifth Street, Derby, CT until 11am July 5, 2016

A Mandatory pre-bid conference will be held on Tuesday June 21, 2016 @ 9AM at Derby High School 8 Nutmeg Ave. Derby CT 06418

The City of Derby BOE reserves the right to reject any or all bids, to waive any defects in same, or to choose to make the sale other than strictly in accordance with price considerations, and/or to choose other than the highest bidder, if it be deemed in the best interest of the City of Derby. Under no circumstances will the City or Board of Education be responsible for the cost of preparing a bid or proposal.

Deliver sealed proposals in duplicate by 11am EDT on July 5, 2016 to:

City Of Derby
Board Of Education
Kitchen Hood
35 Fifth Street
Derby, CT 06418

Description of work:

See attached Drawings and specifications. -Note eEquipment manufacture may be substituted with equal or greater than equipment, at the Project Directors discretion.

Provide all material, labor and equipment to perform the work described and make complete, safe, and functional systems. Bids shall be valid for 120 days.

General Specifications

1. Contractors shall conform to all applicable OSHA safety provisions associated within proposed scope of work. Contractor shall designate one individual as job foreman or project manager who will serve as primary point of contact to BOE on the jobsite.
2. Contractors shall provide all material, labor, tools and equipment required to perform the work described above and make complete, safe, and functional systems. This work shall include, but not be limited to, rigging, cutting, patching, and painting to match existing conditions unless otherwise noted. All wall/floor penetrations performed as part of this scope of work shall be sealed adequately to maintain fire ratings.
3. Contractors shall pay for all permits and inspections required by controlling authority.
4. All work shall be installed in accordance with state, local and national codes.
5. Contractors shall warrant his workmanship and materials for a period of one (1) year from the date of acceptance by owner. Manufacturer's warranties shall be turned over to the Owner upon completion of the project.
6. All work shall be done by mechanics skilled in the particular trade involved, under responsible supervision. Materials and methods used shall conform to recognized best practices. Existing hardware and material must be properly disposed of.
7. Removal of existing hood, Electric and Fire wiring to be done by the Derby BOE.
8. Gas line to be installed by the Derby BOE.

Award process: Project will be awarded to the qualified contractor with a proven track record of successful installations, with the lowest overall cost, and most suitable for the Derby School system.

Schedule of Work: All work to be completed no later than August 26, 2016.

Project Sites:

Derby High School
8 Nutmeg Ave.
Derby CT 06418

GENERAL REQUIREMENTS

Contractors are responsible to insure that all federal, state and local laws/codes are adhered to which apply to this particular work. Successful contractor shall insure the worksite is left in a safe and clean condition throughout the project. Contractors are required to obtain any necessary local permits (when applicable) and must insure that final inspections are completed as a requirement to submit invoicing. Only those contractors that are properly licensed in the State of Connecticut for this type work may bid on this project. Contract must obtain any and all local permits and inspections. Obtain any and all State permits and inspections. ***Work must be performed in a manner that does not interfere with school or student safety.***

WARRANTY

Guarantee workmanship and material provided against defective manufacture or installation. Repair or replace defective workmanship and material appearing within period of one year after Completion. Transfer manufacturer's warranty to the BOE.

Insurance Requirements: Successful bidder (Contractor) shall be capable of providing "Certificate of Insurance" in the amount of \$1,000,000. Certificate must name the City of Derby and the Derby BOE as the certificate holder. Failure to obtain or provide certificate will result in the award of contract to an alternate bidder. Certificate must be received by BOE representative within three (3) business days of bid award. The successful bidder may be required to furnish a Bond with Surety satisfactory to the Corporation Counsel for the faithful performance of the contract

Additional Requirements: No change orders will be issued for material shortages, underestimated labor or any other foreseeable problem.

BID SHEET
Derby Public School
Kitchen Hood and MAU Installation
July 5, 2016 @ 11AM

Name and address of Company

Lump sum bid

\$ _____

Contact person: _____

The lump sum bid is provided to the Derby Board of Education, to provide complete the work as outlined in the "scope of work" and per attached specifications. It is understood that this price includes all insurance requirements and the specified completion requirements set forth in the "scope of work"

Authorized Signature

Date

Description of work:

Attached Drawings and specifications Note Equipment manufacture may be substituted with equal or greater than equipment, at the Project Directors desertion.

NOTE: SCOPE OF WORK FOLLOWS

Hood and fire system, Mau scope of work

HOOD

Captive-Aire Model No. VENTILATION PACKAGE

Captive Aire provides the below described basis of design:

Hood #1 - Left

5424ND-2-PSP-F - 8' ft 0" Long Exhaust-Only Wall Canopy Hood with Front Perforated Supply Plenum with Built-in 3" Back Standoff

- 430 SS Where Exposed x1
- FILTER - 20" tall x 16" wide Stainless Steel Captrate Solo filter with hook, ETL Listed. Particulate capture efficiency: 93% efficient at 9 microns, 72% efficient at 5 microns
- L55 Series E26 Canopy Light Fixture - High Temp Assembly, Includes Clear Thermal and Shock Resistant Globe (L55 Fixture), Bulbs By Others
- EXHAUST RISER - Factory installed 12" X 15" X 4" height
- SUPPLY RISER - 12"x 24" Supply Riser with Volume Dampers x2
- 1/2 Pint Grease Cup New Style, Flanged Slotted x2
- BACKSPLASH 80.00" High X 198.00" Long 430 SS Vertical (Includes End Caps & Divider Bars) x1
- Stainless steel trim to column is to include the following:
8" x 80" flat backsplash and (2) 2" x 2" x 80" as one with inside corner and one with outside corner.
- Stainless trim for hood to column and for utility cabinet to the wall is to include:
(2) 2" x 2" x 24"

AND,

Hood #2 - Right

5424ND-2-PSP-F - 7' ft 6" Long Exhaust-Only Wall Canopy Hood with Front Perforated Supply Plenum with Built-in 3" Back Standoff

- 430 SS Where Exposed
- Utility Cabinet on the Right Side (Adds 12" to overall length.)
- FILTER - 20" tall x 16" wide Stainless Steel Captrate Solo filter with hook, ETL Listed. Particulate capture efficiency: 93% efficient at 9 microns, 72% efficient at 5 microns
- L55 Series E26 Canopy Light Fixture - High Temp Assembly, Includes Clear Thermal and Shock Resistant Globe (L55 Fixture), Bulbs By Others
- EXHAUST RISER - Factory installed 12" X 14" X 4" height
- SUPPLY RISER - 12"x 24" Supply Riser with Volume Dampers x2
- 1/2 Pint Grease Cup New Style, Flanged Slotted 3" Back Standoff
- 430 SS Where Exposed x1

-
- Utility Cabinet on the Right Side x1
 - FILTER - 20" tall x 16" wide Stainless Steel Captrate Solo filter with hook, ETL Listed. Particulate capture efficiency: 93% efficient at 9 microns, 72% efficient at 5 microns x7
 - L55 Series E26 Canopy Light Fixture - High Temp Assembly, Includes Clear Thermal and Shock Resistant Globe (L55 Fixture), Bulbs By Others x3
 - EXHAUST RISER - Factory installed 12" X 14" X 4" x1
 - SUPPLY RISER - 12"x 24" Supply Riser with Volume Dampers x2
 - 1/2 Pint Grease Cup New Style, Flanged Slotted
- CLOSURE TRIM Trim needed for back of hood -

This closure trim is no longer required as the hood commences to the right of the existing far left corner column.

FANS

Captive-Aire Model No. EXHAUST FAN

Fans #1 and #2 NCA14FA - Exhaust Fan (Right and Left Hood section Exhaust)

NCA14FA Belt Drive Centrifugal Upblast Exhaust Fan with 15.75" wheel Exhaust Fan handles 1900 CFM @ -0.800" wc ESP, Fan runs at 1122 RPM. Exhaust Motor: 1.000 HP, 3 Phase 208 V, 60Hz, 3.4 FLA, ODP (Open Drip Proof)

- Grease Cup for kitchen-duty centrifugal exhaust fans, Box Dimensions 17-1/8 L X 5-1/16 W X 3-3/4 H (18 GA.) (Includes Down Spout)

- HINGE KIT - Standard Hinge kit for exhaust fan roof curbs. Includes Hardware to attach hinge to curb and hinge to base. Ships Loose. Used on Fans with wheels 20 inches or smaller. 12 GA Galvanized.

- Exhaust riser collar size is 12" x 4", with a 4" collar height. One per hood section.

Captive-Aire Model No. MUA FAN/UNIT

Ventilation system includes heated tempered makeup supply return air as follows:

- Fan #3 A2-D.250-G15 - Heater A2-D.250-G15 Direct Gas Fired Heated Make Up Air Unit with 15" Blower Supply Fan handles 2969 CFM @ 0.700" wc ESP, Fan runs at 852 RPM. Heater supplies 240489 BTUs. 75°F Temperature Rise. [Fuel: Natural Gas] Supply Motor: 2.000 HP, 3 Phase 208 V, 60Hz, 5.9 FLA, ODP (Open Drip Proof) Down Discharge - Air Flow Right -> Left
- Sloped Filtered Intake for Size #2 Modular Heater. 26.813" Wide X 53.625" Long X 31.313" High. Includes 2" MV EZ Kleen Metal Mesh Filters.
 - RTC Solutions • 4090° F Discharge Temp Control x1
 - Gas Manifold for DF2 GM - BTU 0 - 825001 - 7 in. w.c. - 14 in. w.c., No Insurance Requirement (ANSI), BV250-88
 - Cooling Interlock Relay. 24VAC Coil. 120V Contacts. Locks out burner circuit when AC is energized. x1
 - Motorized Back Draft Damper 22.75" X 24" for Size 2 Standard & Modular Direct Fired Heaters w/Extended Shaft, Standard Galvanized Construction, 3/4" Rear Flange, LF120S Actuator Included
 - Low Fire Start. Allows the burner circuit to energize when the modulation control is in a low fire position. x1
 - Gas Pressure Gauge, 0-35", 2.5" Diameter, 1/4" Thread Size x1
 - Gas Pressure Gauge, -5 to +15 Inches Wc., 2.5" Diameter, 1/4" Thread Size

CONTROLS

- Captive-Aire Model No. ELECTRICAL CONTROL SYSTEM
- Electrical System #1 SC-32111002 3 Phase w/ control for 2 Exhaust Fans, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire. x1
- 14x18 Stainless Steel Box. Includes latch and backplate x1
 - Digital Prewire Lighting Relay Kit. Includes hood lighting relay & terminal blocks. Allows for up to 1400W of lighting each.

Electrical controls will be determined in the field as to their preferred location.

FACTORY SERVICES Captive Aire Service Design Verification is to include the following:

- Building surcharge (installation)
- Direct Fired Heater
- Two exhaust fans
- Electrical controls - standard
- Mileage

This proposal is for a new automatic fire suppression system(s). Hood ducts, plenum and cooking appliances to be protected are as follows: 15'-6" hood over a tilting skillet, a 24" griddle, a 36" 6-burner range, a steamer and (1) oven - R-102-6 gal Standard System Specification - Includes all necessary agent cylinders, mounting hardware, controls, fusible link detection line, (1) SURFACE MOUNTED ONLY pull station, all system piping and nozzles with UL listed seals at exterior hood penetrations, up to (3) micro-switches for use by the electrical/fire alarm trades, a mechanical gas valve up to 2" in size for installation by the plumbing trade, diagrams, local permit and (1) test for the Fire Marshal. All labor at open shop wage rates during normal working hours, M-F, 8pm-4pm. Modifications that change the Standard System Specification must be included in the box below to be in force for this proposal.

Proposal based on the hood having an end cabinet to house the system.

- Electrical Work Exclusion - Electrician's fees and additional equipment needed beyond the microswitches to tie in the following code required functions are not included in this proposal: 1) All live electric under the hood must shut down on system operation. 2) Any forced make-up (fresh) air fan must shut down on system operation (exhaust fans typically remain running). 3) If a building fire alarm system exists, operation of the fire system must sound the alarm. 4) If the system utilizes an electric gas valve, the gas valve must close on system operation and the gas valve circuit must have a manual reset relay installed to prevent automatic valve reopening following a power loss.

Exclusions include:

- All Electrical work - power and control
- Gas valve installation (Valve is furnished, others install.)
- Gas piping

1 ea CHROME DROPS.

Scope of work is to include chrome plated appliance nozzle piping drops through individual vertical penetrations. This covers all black pipe under the hood.

HOOD INFORMATION - Job#2625591

EXHAUST SYSTEM														HOOD CONFIG.		
HOOD NO.	TAG	MODEL	LENGTH	MAX. EXHAUST TEMPER.	TOTAL EXHAUST CFM	WIDTH	LENGTH	HEIGHT	DIA.	CFM	S.P.	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD END TO	HOOD END TO	
														END	END	
1	Left	5424	8' 0.00"	600	1800	10'	16"	4"		1800	-0.666"	1440	430 SS	Where Exposed	LEFT	ALONE
2	Right	5424	7' 6.00"	600	1688	10'	15"	4"		1688	-0.713"	1380	430 SS	Where Exposed	RIGHT	ALONE

HOOD INFORMATION

HOOD NO.	TAG	TYPE	QTY/HEIGHT	LENGTH	EFFICIENCY @ 9 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	UTILITY CABINETS			
											FIRE SYSTEM	ELECTRICAL	SWITCHES	FIRE HOOD
1	Left	Captate Solo Filter	6	20'	16"	93% Spec.	3	L55 Series E26	NO	12" x 54" x 24"		MODEL #	QUANTITY	SYSTEM
2	Right	Captate Solo Filter	5	20'	16"	93% Spec.	3	L55 Series E26	NO	12" x 54" x 24"				426 LBS

HOOD OPTIONS

HOOD NO.	TAG	OPTION	
		BACKSLASH	80.00' High X 198.00' Long 430 SS Vertical
1	Left	BACKSLASH	80.00' High X 8.00' Long 430 SS Vertical
		LEFT SIDESPLASH	80.00' High X 54.00' Long 430 SS Vertical
		BACKSLASH - INSIDE CORNER	80.00' High X 2.00' Leg Length 430 SS Vertical
		BACKSLASH - INSIDE CORNER	80.00' High X 2.00' Leg Length 430 SS Vertical
		BACKSLASH - OUTSIDE CORNER	80.00' High X 2.00' Leg Length 430 SS Vertical

PERFORATED SUPPLY PLENUMS

HOOD NO.	TAG	POS.	LENGTH	WIDTH	HEIGHT	RISERS			
						TYPE	WIDTH	LENG.	DIA.
1	Left	Front	96"	16"	6"	MUA	12"	24"	720
2	Right	Front	102"	16"	6"	MUA	12"	24"	720

SPECIFICATION: CAPTATE GREASE-STOP SOLID FILTER

THE CAPTATE GREASE-STOP SOLID FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAY DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

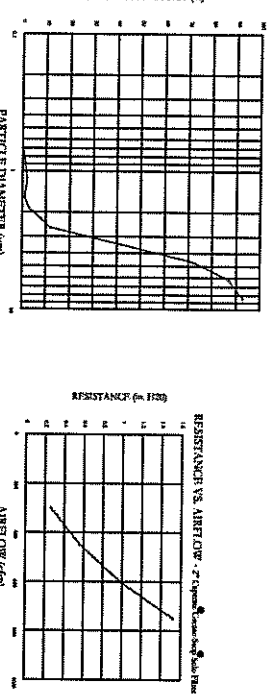
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNELS.

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 90% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 10 INCHES OF WATER GAUGE.

THE CAPTATE GREASE-STOP SOLID WAS TESTED TO ASTM STANDARD ASTM F2519-05.

FILTER COLLECTION EFFICIENCY: Captate Solo Solid Filter

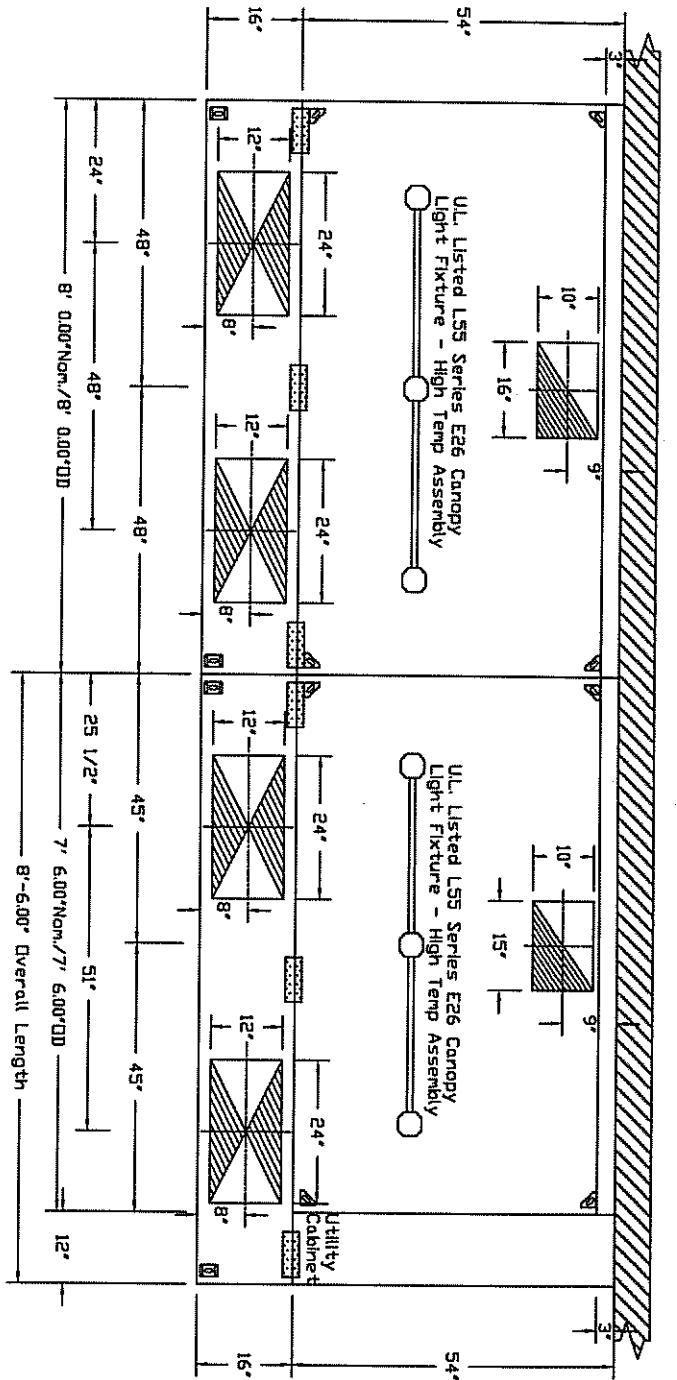


CAPTATE FILTERS ARE BUILT IN COMPLIANCE WITH:
 NFPA #96
 NSF STANDARD #2
 UL STANDARD #1046
 INT. MECH. CODE (IMC)



CAPTATE

JOB Derby HS-Derby CT
LOCATION DERBY, CT, 06418
DATE 5/16/2016
DWG # 1
REV.
JOB # 2625591
DRAWN BY SAC
SCALE 3/8" = 1'-0"



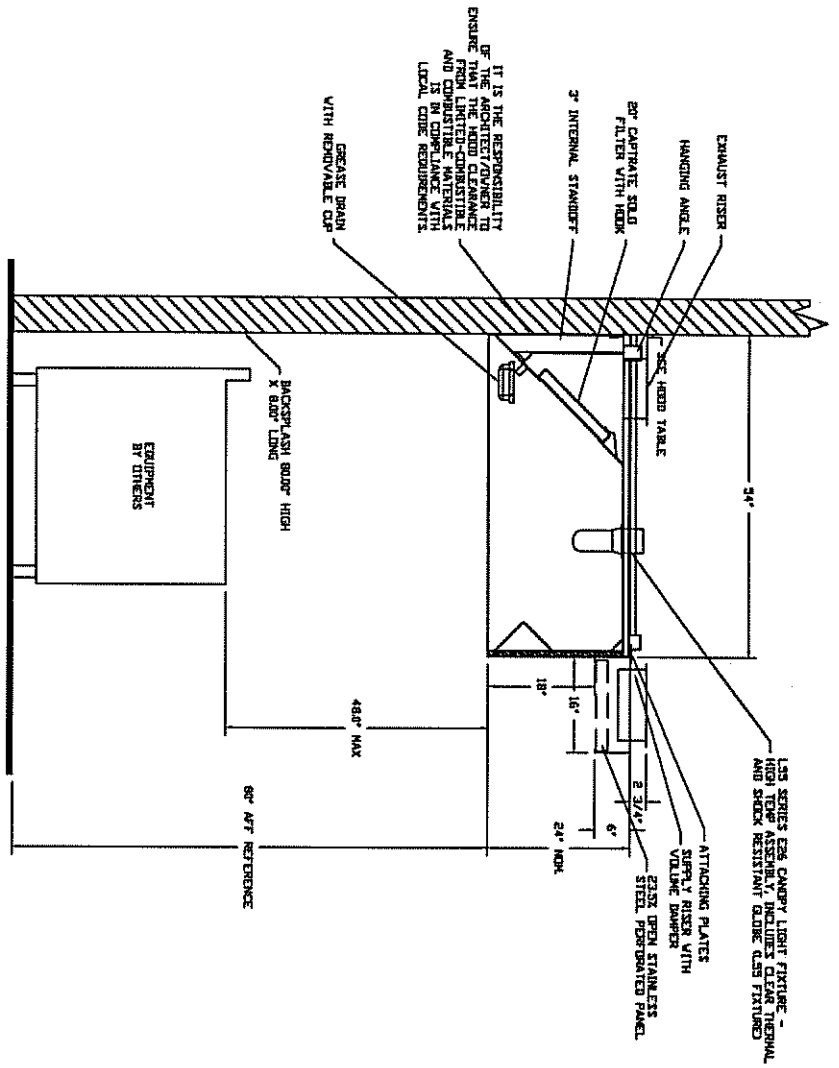
PLAN VIEW - Hood #1 (Left)
8' 0.00" LONG 5424ND-2-PSP-F

PLAN VIEW - Hood #2 (Right)
7' 6.00" LONG 5424ND-2-PSP-F



CAPTIVE AIR

JOB Derby HS-Derby CT	JOB # 2625591
LOCATION DERBY, CT, 06418	DRAWN BY SAC
DATE 5/16/2016	SCALE 3/8" = 1'-0"
DWG # 2	
REV.	



SECTION VIEW - MODEL 5424ND-2-RSP-F
HOOD - #1 (Left)



CAPTIVEAIRE

JOB Derby HS-Derby CT			
LOCATION DERBY, CT, 06418			
DATE	5/16/2016	JOB #	2625591
DWG #	3	DRAWN BY	SAC
REV.		SCALE	3/8" = 1'-0"

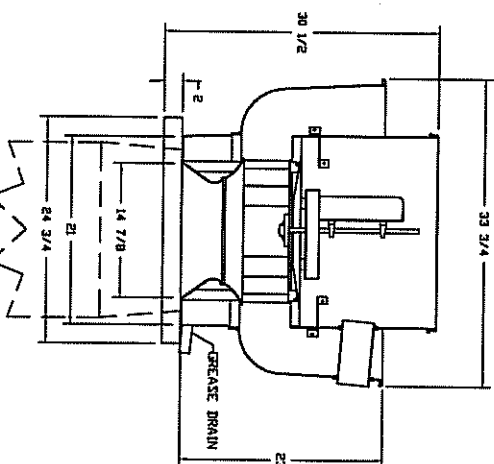
UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	HP.	B.H.P.	Ø	VOLT	FLA	WEIGHT (LBS.)	SINCE
1	Left Ex	MCALFA	1800	0.800	1100	1.000	0.4490	3	208	3.4	129	11.5
2	Right Ex	MCALFA	1900	0.950	1185	1.000	0.5540	3	208	3.4	129	12.6

UNIT NO.	TAG	FAN UNIT MODEL #	BLOWER	HOUSING	CFM	ESP.	HPM	HP.	BHP.	#	VOL.T	FLA	WEIGHT (LBS.)	SDNES	BURNER EFFICIENCY%
3		AE-D250-G15	G15-PB	AE-D250	2820	0.700	843	2.000	1.3100	3	208	5.9	766	13.4	92

3	248283	228420	75 deg F	7 in. w.c. - 14 in. w.c.	Natural	
UNIT NO.	TAG	INPUT BTUS	OUTPUT BTUS	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE

UNIT NUMBER ML	TAG	OPTION (Qty. - Descr.)
1	Left Ex	1 - Grease Box 1 - Hinge Kit - Ships Loose for Curb Supplied by Others
2	Right Ex	1 - Grease Box 1 - Hinge Kit - Ships Loose for Curb Supplied by Others
3		1 - AC Interlock Relay - 24VAC Coil 1 - Motorized Backdraft Damper for AE-1 Housing 1 - Low Fire Start 1 - Inlet Pressure Gauge, 0-35" 1 - Manifold Pressure Gauge, -5 to 15" wc

FAN UNIT NO.	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	V.A.L. MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	AUTORIZED DAMPER	V.A.L. MOUNT
1	L ^{eft} Ex	YES						
2	R ^{ight} Ex	YES						
3							YES	



DUCTWORK BETWEEN
EXHAUST RISER ON HOOD
AND FAN (BY OTHERS)

FANS #1 (LEFT EX), #2 (RIGHT EX) - NCA14FA EXHAUST FAN

- ROOF MOUNTED FANS
- RESTAURANT MODEL
- U.L.709 AND U.L.762
- MCA SOUND AND AIR CERTIFIED
- WIRING FROM MOTOR TO DISCONNECT SWITCH
- WEATHERPROOF DISCONNECT
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DEREGRATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F CLEARED FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

GREASE BOX
HINGE KIT - SHIPS LOOSE FOR CURB SUPPLIED BY OTHERS



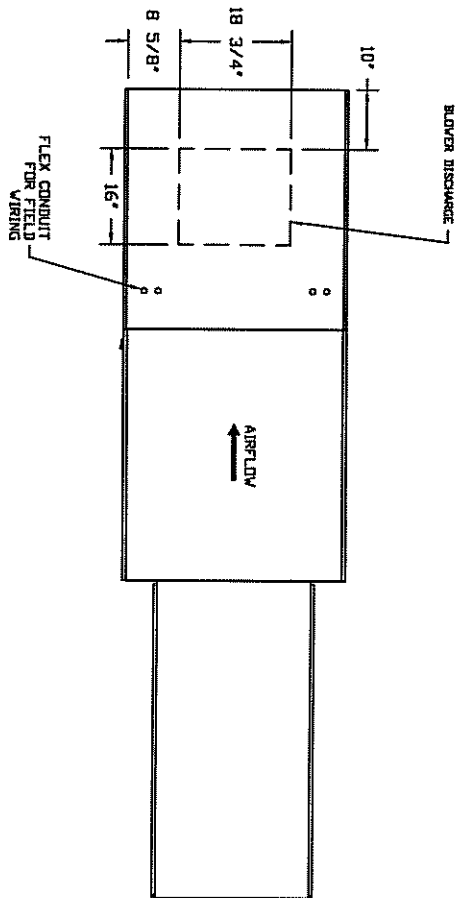
CAPTIVATED

JOB Derby HS-Derby CT	
LOCATION DERBY, CT, 06418	
DATE 5/16/2016	JOB # 2625591
DWG # 5	DRAWN BY SAC
REV.	SCALE 3/8" = 1'-0"

- FAN #3 A2-D250-GIS - HEATER
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 15" BLOWER
2. INTAKE HOOD WITH EZ FILTERS
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
4. COOLING INTERLOCK RELAY, 24VAC COIL, 120V CONTACTS, LOCKS OUT BURNER CIRCUIT WHEN AC IS ENERGIZED
5. MOTORIZED BACK DRAFT DAMPER 22 7/8" X 24" FIRE SIZE 2 STANDARD & MODULAR DIRECT FIRED HEATERS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LIFTS ACTUATOR INCLUDED
6. LOW FIRE START, ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
7. GAS PRESSURE GAUGE, 0-35", 25" DIAMETER, 1/4" THREAD SIZE
8. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC, 25" DIAMETER, 1/4" THREAD SIZE

SUPPLY SIDE HEATER INFORMATION

WINTER TEMPERATURE = 0°F, TEMP. RISE = 75°F,
BTUS CALCULATED OFF STANDARD AIR DENSITY
OUTPUT BTUS AT ALTITUDE OF 0.0 F.T. = 228420
INPUT BTUS AT ALTITUDE OF 0.0 F.T. = 248283



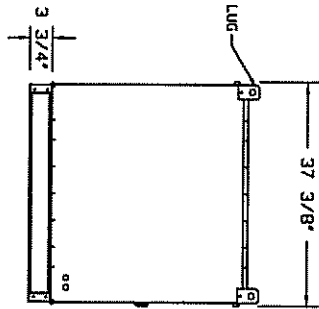
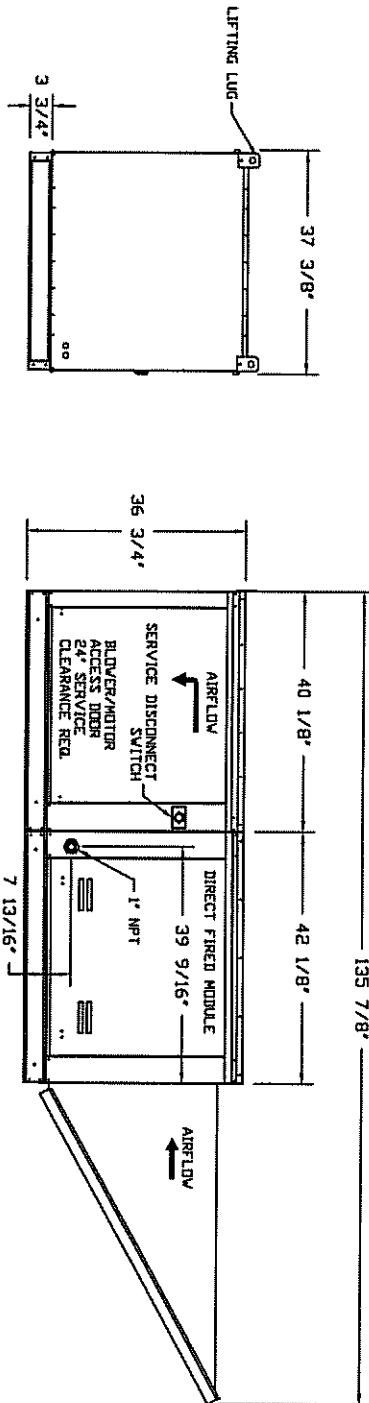
Direct Fired (DF) Profile Plate Assembly

Direct Fired (DF) Profile Plate Assembly

Direct fired burner assembly consists of a burner, burner control, and burner gas valve. The burner assembly is designed to burn natural gas or propane. The burner control is designed to control the burner operation. The burner gas valve is designed to control the gas flow to the burner.

The burner assembly is designed to burn natural gas or propane. The burner control is designed to control the burner operation. The burner gas valve is designed to control the gas flow to the burner.

The burner assembly is designed to burn natural gas or propane. The burner control is designed to control the burner operation. The burner gas valve is designed to control the gas flow to the burner.



CAPTIVEAIR

JOB Derby HS-Derby CT			
LOCATION DERBY, CT, 06418			
DATE	5/16/2016	JOB #	2625591
DWG #	6	DRAWN BY	SAC
REV.		SCALE	3/8" = 1'-0"

Exhaust Fan Wiring

JOB 2625591 - Derby HS-Derby CT

DRAWING NUMBER EXH2625591-1

SHIP DATE 5/16/2016

MODEL NCA14FA

Installed Options

Component Identification

Label	Description	Location
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MT-01	Fan Motor	(2)
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SW-01	Main disconnect switch	(2)
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MOTOR INFO

EXHAUST 1HP-208V-3P-3.4FLA

ELECTRICAL INFORMATION

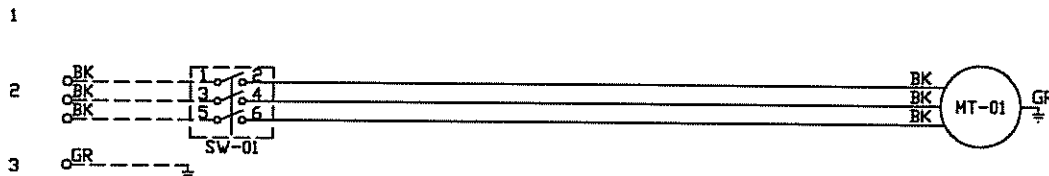
MOTOR/CTRL MCA: 4.3A
MOTOR/CTRL MOP: 15A

NOTES

----- DENOTES FIELD WIRING
————— DENOTES INTERNAL WIRING

WIRE COLOR

BK - BLACK	YW - YELLOW
BL - BLUE	GR - GREEN
BR - BROWN	GY - GRAY
OR - ORANGE	PR - PURPLE
RD - RED	PK - PINK
WH - WHITE	



Exhaust Fan Wiring

JOB 2625591 - Derby HS-Derby CT

DRAWING NUMBER EXH2625591-2

SHIP DATE 5/16/2016

MODEL NCA14FA

Installed Options

Component Identification

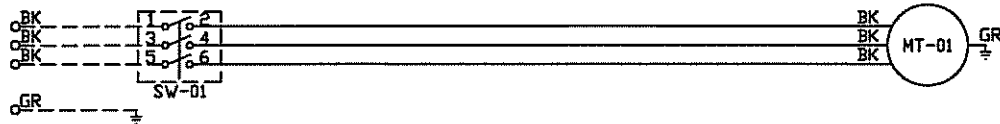
Label	Description	Location
MT-01	Fan Motor	[2]
SW-01	Main disconnect switch	[2]

MOTOR INFO
EXHAUST 1HP-208V-3P-3.4FLA

ELECTRICAL INFORMATION
MOTOR/CTRL MCA: 4.3A
MOTOR/CTRL MOP: 15A

NOTES
----- DENOTES FIELD WIRING
————— DENOTES INTERNAL WIRING

WIRE COLOR
BK - BLACK YW - YELLOW
BL - BLUE GR - GREEN
BR - BROWN GY - GRAY
OR - ORANGE PR - PURPLE
RD - RED PK - PINK
WH - WHITE



Direct Fired Heater Wiring

JOB 2625591 - Derby HS-Derby CT

DRAWING NUMBER DF2625591-3

SHIP DATE 5/16/2016

MODEL A2-D.250-G15

ATTENTION ELECTRICIAN:
DROP FOR DISCONNECT CONNECTION
IS FACTORY SUPPLIED
CONNECT POWER TO THE DROP

Installed Options

Motorized Back Draft Damper

Discharge Temp. Control

24V AC Interlock Relay

Component Identification
Label Description Location
CB-01 Circuit breaker (2amp) [2]

FR-01 Flame rod [16]
FSC-01 Fireeye FSC [11-14]
MA-01 Modulating amplifier [19]
MT-01 Supply motor [21]
MT-02 Damper motor [5]
OL-01 Supply motor overload [217]

PS-01 Low Airflow Switch [19]
PS-02 High Airflow Switch [19]

RE-10 AC Interlock Relay [10K17]

ST-01 Supply motor contactor [21E7E9]

SV-01 Main disconnect switch [21]
SV-03 Damper end unit switch [41]

TR-01 Power transformer (200va) [12]
TR-02 Power transformer (20va) [14]
TR-03 Ignition transformer [14]
TR-04 Power transformer (20va) [17]

TS-02 High temp Unit switch [10]
TS-03 Intake Air Sensor [10]
TS-05 Discharge Air Sensor [21]

VA-01 Pilot gas valve [13]
VA-02 Main gas valve [13]
VA-03 Modulating gas valve [20]

MOTOR INFO

SUPPLY CONTACTOR: 2HP-208V-3P-5.9FLA
OVERLOAD: 100-K09D10
193-KB63

ELECTRICAL INFORMATION

MOTOR/CTRL CIRCUIT MCA: 8.6A
MOTOR/CTRL CIRCUIT MOP: 15A

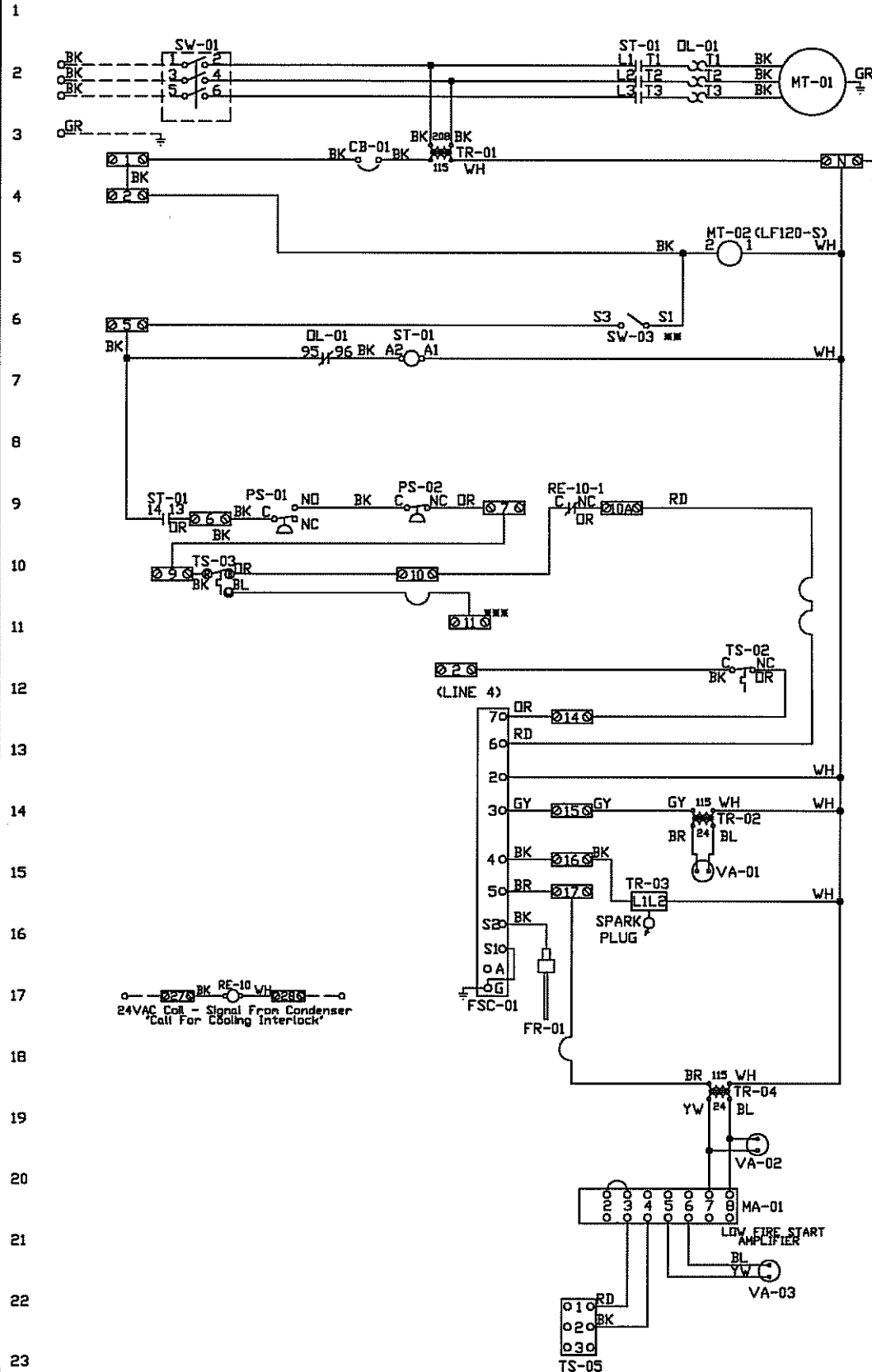
NOTES

--- DENOTES FIELD WIRING
— DENOTES INTERNAL WIRING

*** TERMINALS S4 AND S6 USED ON
NF & AF SERIES ACTUATORS
*** TERMINAL 11 PROVIDES COOLING
CONNECTION

WIRE COLOR
BK-BLACK YV-YELLOW RD-RED
BL-BLUE GR-GREEN WH-WHITE
BR-BROWN GY-GRAY PK-PINK
OR-ORANGE PR-PURPLE

WIRE COLOR
NO 1 3
NC 2 1
CN 8 7
CN 6 5



Installation Wiring

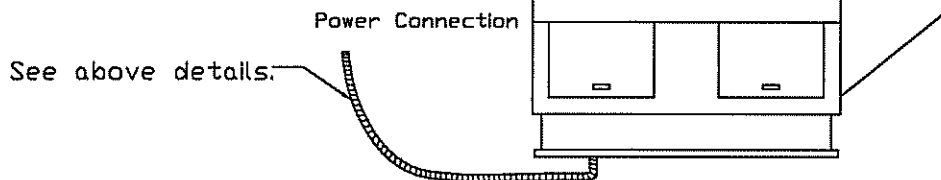
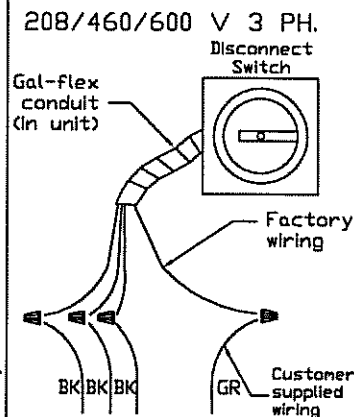
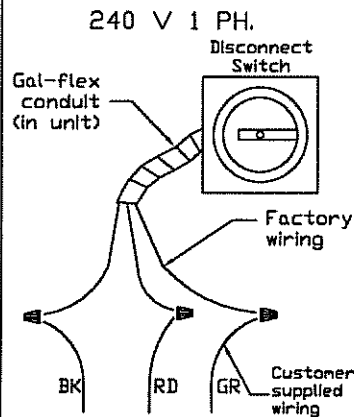
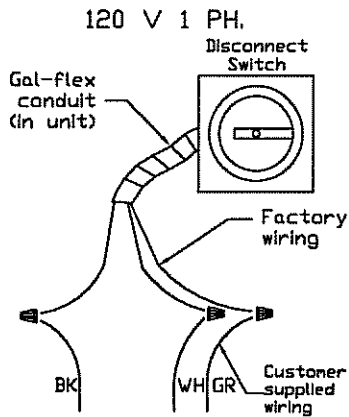
JOB 2625591 - Derby HS-Derby CT

DRAWING NUMBER RP2625591-3

SHIP DATE 5/16/2016

MODEL A2-D.250-G15

Installed Options



NOTES

WIRE COLOR

BK - BLACK	YW - YELLOW
BL - BLUE	GR - GREEN
BR - BROWN	GY - GRAY
OR - ORANGE	PR - PURPLE
RD - RED	PK - PINK
WH - WHITE	

ELECTRICAL PACKAGES - Job#2625591

Mtl.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	HP	VOLT	FLA	
1		SC-3211002	Wall Mount In SS Box	SS Wall Mount Box	1 Light 1 Fan	Smart Controls Basic	Left Ex	Exhaust	3	1000	208	3.4
							Right Ex	Exhaust	3	1000	208	3.4
							Supply	3	2000	208	5.9	



CAPTIVE AIR

JOB Derby HS-Derby CT
 LOCATION DERBY, CT, 06418
 DATE 5/16/2016
 DWG # 11
 REV.

JOB # 2625591
 DRAWN BY SAC
 SCALE 3/8" = 1'-0"

JOB NO
2625591

MODEL NUMBER
SC-3211002

JOB NAME
Derby HS-Derby CT

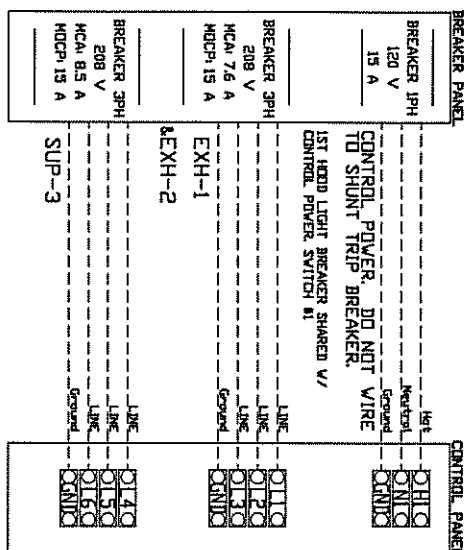
DRAWN BY
DATE
5/16/2016

SCHEMATIC TYPE
INSTALL
ECP M-1

DESCRIPTION OF OPERATION:
3 Phase w/ Control for 2 Exhaust Fans, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire.

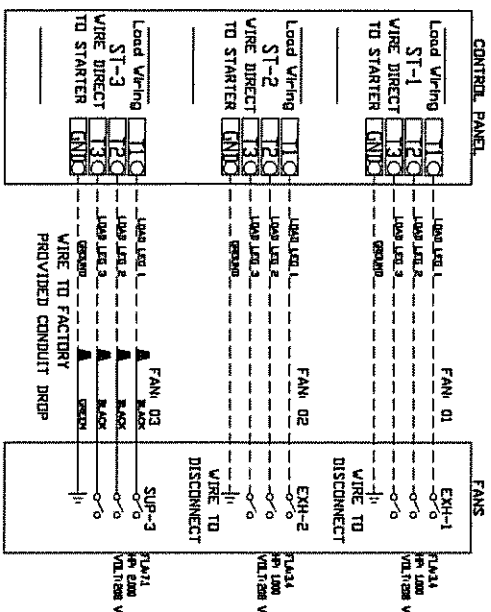
BREAKER PANEL TO CONTROL PANEL

Responsibility: Electrician
BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED



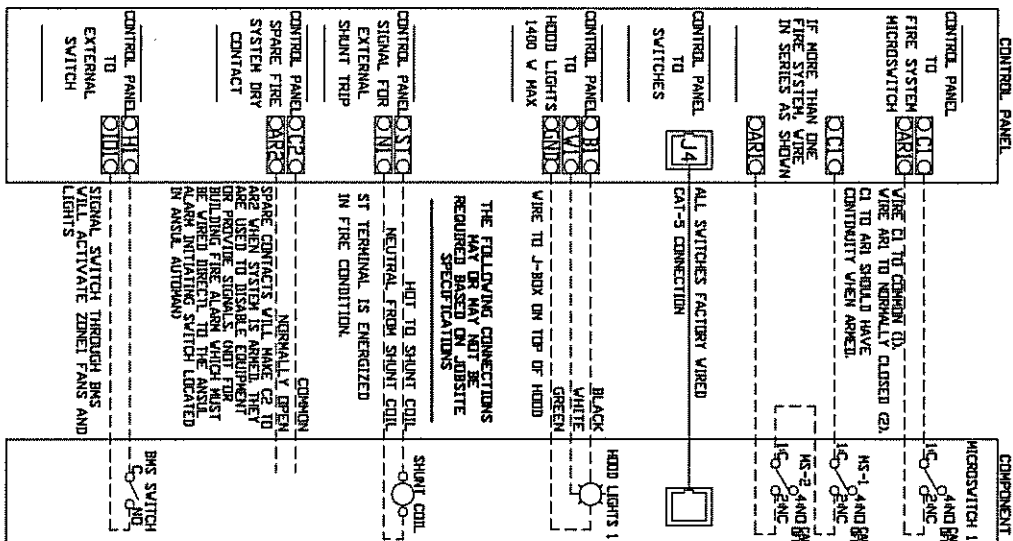
CONTROL PANEL TO FANS

Responsibility: Electrician



CONTROL PANEL TO ACCESSORY ITEMS

Responsibility: Electrician



System Design Verification (SDV)

If ordered, CAS Service will perform a System Design Verification (SDV) once all equipment has had a complete start up per the Operation and Installation Manual. Typically, the SDV will be performed after all inspections are complete.

Any field related discrepancies that are discovered during the SDV will be brought to the attention of the general contractor and corresponding trades on site. These issues will be documented and forwarded to the appropriate sales office. If CAS Service has to resolve a discrepancy that is a field issue, the general contractor will be notified and billed for the work. Should a return trip be required due to any field related discrepancy that cannot be resolved during the SDV, there will be additional trip charges.

During the SDV, CAS Service will address any discrepancy that is the fault of the manufacturer. Should a return trip be required, the general contractor and appropriate sales office will be notified. There will be no additional charges for manufacturer discrepancies.



CAPTIVE AIR

JOB Derby HS-Derby CT			
LOCATION DERBY, CT, 06418			
DATE	5/16/2016	JOB #	2625591
DWG #	14	DRAWN BY	SAC
REV.		SCALE	3/8" = 1'-0"